

Patent Claims

- 5 1. Negative birefringent retardation film comprising polymerised liquid crystal (LC) material with helically twisted structure and planar orientation, wherein the helical pitch of the LC material is 200 nm or less.
- 10 2. Film according to claim 1, wherein the helical pitch is from > 50 nm to 200 nm.
- 15 3. Film according to claim 2, wherein the helical pitch is from 55 to 175 nm.
- 20 4. Film according to at least one of claims 1 to 3, wherein the polymerised LC material is polymerised or crosslinked chiral nematic or cholesteric LC material.
- 25 5. Film according to at least one of claims 1 to 4, wherein the LC director at one surface is parallel or antiparallel to the LC director at the opposite surface.
- 30 6. Combination comprising a negative birefringent retardation film according to at least one of claims 1 to 4 and a linear polariser, wherein the director at the surface of said retardation film facing said polariser and the polarisation direction of said polariser are oriented at an angle of from 30 to 60° relative to each other.
- 35 7. Combination according to claim 6, wherein said angle is 45°.
8. Use of a negative retardation film or a combination according to at least one of claims 1 to 7 in compensators and electrooptical displays or liquid crystal displays.
9. Compensator comprising a negative retardation film or a combination according to at least one of claims 1 to 7.

10. Liquid crystal display comprising a negative retardation film or a combination according to at least one of claims 1 to 7.

5 11. Liquid crystal display according to claim 10, characterized in that it is a display of the VA (vertically aligned), MVA (multi-domain vertically aligned), PVA (patterned vertically aligned), ECB (electrically controlled birefringence), TN (twisted nematic), HTN (highly twisted nematic) or STN (super twisted nematic) mode.

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